ABSTRACT

To manufacture a non-volatile memory, an oxide film is deposited on a substrate, a flash device area and a logic gate area are removed and a tunnel oxide layer is stacked on an opened surface of the substrate. A first polysilicon is stacked over the resultant structure, a polish is carried out and the oxide film is removed. An LDD is formed in an upper portion of the substrate excepting an area occupied by the tunnel oxide layer, a sidewall is deposited on a side of the first polysilicon, a drain and a source are generated beneath the LDD excepting an area contacted to the sidewall and a TEOS is stacked on the resultant structure excepting the flash device area. An ONO layer is deposited over the resultant structure, a second polysilicon is stacked over the ONO layer, a polish is carried out and the TEOS is removed.